

WHAT IS CLAIMED IS:

1. An isolated complex comprising a peptide agent having a sequence that corresponds to Serum amyloid A (SAA) or a conservative variant or functional fragment thereof bound to a molecule of FPRL1.
2. A polypeptide fragment of SAA that inhibits assembly of an SAA/FPRL1 complex by interacting with a FPRL1 receptor.
3. A nucleic acid encoding the polypeptide of Claim 2.
4. A polypeptide fragment of FPRL1 that inhibits assembly of an SAA/FPRL1 complex by interacting with a FPRL1 receptor.
5. A nucleic acid encoding the polypeptide of Claim 4.
6. A method of inhibiting assembly of an SAA/FPRL1 complex comprising the steps of:
 - administering the polypeptide of Claims 2 or 4; and
 - measuring the effect of the polypeptide as a ligand that interacts with a FPRL1 receptor.
7. A method of identifying an agent that modulates the assembly of an SAA/FPRL1 complex comprising:
 - providing a support having disposed thereon a molecule of SAA;
 - contacting the support with a candidate agent in the presence of a molecule of FPRL1;
 - detecting the presence or absence of an SAA/FPRL1 complex; and
 - identifying the agent as a molecule that promotes assembly of the SAA/FPRL1 complex or inhibits assembly of the SAA/FPRL1 complex.
8. A polypeptide fragment of SAA or FPRL1 identified by the method of Claim 7.
9. A peptidomimetic that resembles the polypeptide fragment of Claim 8.
10. A nucleic acid encoding at least a portion of SAA or FPRL1 identified by the method of Claim 7.
11. A method of modulating a cellular response in a subject comprising:

identifying a subject in need of a peptide agent that modulates a SAA/FPRL1 complex; and

5 administering to the subject an amount of the peptide agent sufficient to modulate a cellular response, wherein the peptide agent comprises a sequence that corresponds to Serum amyloid A (SAA) or FPRL1, or conservative variants or functional fragments thereof.

12. The method of Claim 11, wherein the peptide agent is SAA having at least one acidic amino acid replaced with a different acidic amino acid.

10 13. The method of Claim 11, wherein the peptide agent is Serum amyloid A (SAA) having at least one basic amino acid replaced with a different basic amino acid.

14. The method of Claim 11, wherein the peptide agent is Serum amyloid A (SAA) having at least one nonpolar amino acid replaced with a different nonpolar amino acid.

15 15. The method of Claim 11, wherein the peptide agent is Serum amyloid A (SAA) having at least one uncharged amino acid replaced with a different uncharged amino acid.

16. The method of Claim 11, wherein the peptide agent is Serum amyloid A (SAA) having at least one aromatic amino acid replaced with a different aromatic amino acid.

20 17. A method of modulating a cellular response in a subject comprising:

administering to the subject an amount of a peptide agent having a sequence that corresponds to Serum amyloid A (SAA) or FPRL1 or conservative variants or functional fragments thereof sufficient to modulate a cellular response; and

measuring the effect of the peptide agent as a ligand that interacts with a FPRL1 receptor.

18. The method of Claim 17, wherein the peptide agent is Serum amyloid A (SAA) or FPRL1 having at least one acidic amino acid replaced with a different acidic amino acid.

19. The method of Claim 17, wherein the peptide agent is Serum amyloid A (SAA) or FPRL1 having at least one basic amino acid replaced with a different basic amino acid.

5 20. The method of Claim 17, wherein the peptide agent is Serum amyloid A (SAA) or FPRL1 having at least one nonpolar amino acid replaced with a different nonpolar amino acid.

21. The method of Claim 17, wherein the peptide agent is Serum amyloid A (SAA) FPRL1 having at least one uncharged amino acid replaced with a different uncharged amino acid.

10 22. The method of Claim 17, wherein the peptide agent is Serum amyloid A (SAA) or FPRL1 having at least one aromatic amino acid replaced with a different aromatic amino acid.

23. A method of making a pharmaceutical product comprising:
providing a peptide agent having a sequence corresponding to
15 Serum amyloid A (SAA) or FPRL1, or conservative variants or functional fragments thereof;
providing a cell having a molecule of FPRL1 that interacts with the peptide agent;
contacting the peptide agent with the cell under conditions that
20 allow the peptide agent to interact with the FPRL1 molecule on the cell;
identifying the presence or absence of signal transduction generated in response to the interaction of the peptide agent with the FPRL1 molecule; and
incorporating the peptide into the pharmaceutical product.

25 24. The method of Claim 23, wherein the peptide agent is Serum amyloid A (SAA) having at least one acidic amino acid replaced with a different acidic amino acid.

25 25. The method of Claim 23, wherein the peptide agent is Serum amyloid A (SAA) having at least one basic amino acid replaced with a different
30 basic amino acid.

26. The method of Claim 23, wherein the peptide agent is Serum amyloid A (SAA) having at least one nonpolar amino acid replaced with a different nonpolar amino acid.

27. The method of Claim 23, wherein the peptide agent is Serum amyloid A (SAA) having at least one uncharged amino acid replaced with a different uncharged amino acid.

5 28. The method of Claim 23, wherein the peptide agent is Serum amyloid A (SAA) having at least one aromatic amino acid replaced with a different aromatic amino acid.